Sargent Corporation
Penobscot County
Stillwater, Maine
A-942-71-G-A (SM)

Departmental
Findings of Fact and Order
Air Emission License
Amendment #2

FINDINGS OF FACT

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Sargent Corporation (Sargent), located in Stillwater, Maine was issued Air Emission License A-942-71-E-R on February 3, 2012, permitting the operation of emission sources associated with their portable crushed stone and gravel facility. The license was subsequently amended on February 25, 2015 (A-942-71-F-M).

Sargent has requested a minor modification to their license in order address the installation of a jaw crusher and associated drive engine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License:

Rock Crushers

Equipment	Powered	Process Rate (tons/hour)	Date of Manufacture	Control Device
#81032 JCI FT250 (Jaw)	Engine #2	300	2014	Spray Nozzles

Generator Units

Equipment	Maximum Design Heat Input Capacity (MMBtu/hr)	Maximum Output Capacity (kW)	Firing Rate (gal/hour)	Fuel Type (% sulfur)	Date of Manufacture
Engine #2	2.2	224	12	Distillate Fuel (0.0015%)	2014

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396, diesel fuel oil numbers 1 or 2, as defined in ASTM D975, kerosene, as defined in ASTM D3699, biodiesel as defined in ASTM D6751, or biodiesel blends as defined in ASTM D7467.

D. Application Classification

Since the annual facility-wide fuel limit is remaining the same as previously licensed, this amendment will not increase emissions of any pollutant; therefore, this application is determined to be a minor modification and has been processed as such.

The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

II. BEST PRACTICAL TREATMENT

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Rock Crushers (Jaw #81032 JCI FT250)

Jaw Crusher #81032 is a portable unit which has a throughput capacity of 300 tons/hour and was manufactured in 2014.

1. BACT/BPT Findings

The regulated pollutant from the rock crusher is particulate matter emissions. To meet the requirements of BPT for control of particulate matter emissions from the rock crusher, Sargent shall maintain water sprays on the rock crusher and operate as needed to control visible emissions. Visible emissions from the

rock crusher shall be limited to no greater than 10% opacity on a six-minute block average basis.

2. New Source Performance Standards

Because Jaw Crusher #81032 is portable, has a capacity greater than 150 tons/hour and was manufactured after August 31, 1983, it is subject to USEPA's New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart OOO for Nonmetallic Mineral Processing Plants.

40 CFR Part 60, Subpart OOO, §60.675 requires that Sargent conduct an initial performance test on Crusher #81032. The performance test was completed on December 4, 2015 and all necessary documentation has been provided to the Department.

C. Engine #2

Engine #2 is a portable engine used to power Jaw Crusher #81032. Engine #2 was manufactured in 2014 and has a maximum capacity of 2.2 MMBTU/hour, firing distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). The distillate fuel fired in Engine #2 shall be included in the facility-wide limit of 30,000 gallons/year, on a calendar-year basis.

1. BACT/BPT Findings

The BACT/BPT emission limits for Engine #2 were based on the following:

PM/PM_{10}	0.12 lb/MMBtu, 06-096 CMR 103
SO_2	combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	4.41 lb/MMBtu, AP-42 dated 10/96
CO	0.95 lb/MMBtu, AP-42 dated 10/96
VOC	0.35 lb/MMBtu, AP-42 dated 10/96
Opacity	06-096 CMR 101

The BACT/BPT emission limits for Engine #2 are the following:

Equipment	Pollutant	lb/MMBtu
Engine #2	PM	0.12

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #2 - Distillate fuel	0.25	0.25	0.01	9.66	2.08	0.77

Visible emissions from Engine #2 shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

2. New Source Performance Standards

Engine #2 is considered a non-road engine, as opposed to a stationary engine, since Engine #2 is portable and will be moved to various sites with the asphalt plant. Therefore, Engine #2 is not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

3. National Emission Standards for Hazardous Air Pollutants

Engine #2 is considered a non-road engine, as opposed to a stationary engine, since Engine #2 is portable and will be moved to various sites with the rock crusher. Therefore, Engine #2 is not subject to 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.*

The definition in 40 CFR Part 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including: "Portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform." 40 CFR Part 1068.30 further states that an engine is not a non-road engine if it remains or will remain at a location for more than twelve consecutive months or a shorter period of time for an engine located at a seasonal source. An engine located at a seasonal source (a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year) is an engine that remains at a seasonal source during the full annual operating period of the seasonal source.

D. Stock Piles and Roadways

Visible emissions from any fugitive emission source shall not exceed an opacity of 20%, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour.

E. General Process Emissions

Visible emissions from any general process (including conveyor belts, transfer points, etc.) associated with an NSPS rock crusher shall not exceed an opacity of 7% on a six-minute block average basis.

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed an opacity of 20% on a six-minute block average basis except for no more than one six-minute block average in a one-hour period.

F. Annual Emissions

1. Total Annual Emissions

Sargent shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on firing a facility-wide total of 30,000 gallons/year of distillate fuel in Engines #2, #4 and #6.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Engines #2, #4 and #6	0.2	0.2	negligible	9.0	2.0	0.8
Total TPY	**0.2**	**0.2**	negligible	**9.0**	**2.0**	**0.8**

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO_2e).

The quantity of CO_2e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;

- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM	25
PM_{10}	25
SO_2	50
NO_x	100
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-942-71-G-A, subject to the conditions found in Air Emission A-942-71-E-R, Amendment A-942-71-F-M and the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following shall replace Condition (16) of Air Emission License A-942-71-E-R:

(16) **Rock Crushers**

A. Sargent shall install and maintain spray nozzles for particulate control on Crushers #81031, #81032 and #81017 and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six-minute block average basis. [06-096 CMR 115, BPT and 06-096 CMR 101]

B. Sargent shall maintain a log detailing and quantifying the hours of operation on a daily basis for Crushers #81031, #81032 and #81017. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

C. Sargent shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). Sargent shall perform monthly inspections of any water sprays to ensure water is flowing to the correct locations and initiate corrective action within twenty-four hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required shall be included in the maintenance log. The maintenance log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

D. Crushers #81031, #81032 and #81017 shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [06-096 CMR 115, BPT]

E. Crushers #81031, #81032 and #81017 are subject to 40 CFR Part 60 Subparts A and OOO and Sargent shall comply with the notification and record keeping requirements of 40 CFR Part 60.676 and Part 60.7, except for Section (a)(2) of 60.7 per Subpart OOO, §60.676(h).

The following shall replace Condition (17) of Air Emission License A-942-71-E-R:

(17) **Engines #2, #4 & #6**

A. Fuel Use

1. Engines #2, #4 and #6 are licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). [06-096 CMR 115, BPT/BACT]

2. Total annual fuel use for Engines #2, #4 and #6 combined shall not exceed 30,000 gallons/year of distillate fuel. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel

delivered. Records of annual fuel use shall be kept on a monthly and calendar-year total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
Engine #2	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Engine #4	PM	0.12	

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #2	0.25	0.25	0.01	9.66	2.08	0.77
Engine #4	0.43	0.43	0.01	15.70	3.38	1.25
Engine #6	0.26	0.26	0.01	9.70	2.09	0.77

D. Visible emissions from Engines #2, #4 and #6 shall each not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 CMR 101]

DONE AND DATED IN AUGUSTA, MAINE THIS 11 DAY OF February, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-942-71-E-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 8, 2015
Date of application acceptance: December 23, 2015

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J Ostrowski, Bureau of Air Quality.

Filed
FEB 16 2016
State of Maine
Board of Environmental Protection